



January 19, 2021

SENT VIA: EMAIL

Rebecca Li, PE
Senior Civil Engineer
City of Garden Grove
13802 Newhope Street
Garden Grove, CA 92843

SUBJECT: Request for Proposal – City of Garden Grove – Sanitation SCADA Upgrade

Dear Ms. Li:

The purpose of this letter proposal is to provide the City of Garden Grove with a proposed Scope of Services, Budget and Schedule for the Sanitation SCADA Upgrade project.

SCOPE OF SERVICES

The following describes each of the key tasks necessary to perform this proposed Scope of Services.

Task 6. Sanitation SCADA Upgrade

Task 6.1 – Project/Program Management

The objective of project management activities is to track work progress and expenditures using proactive communications, quality assurance and quality control to keep the project on schedule and budget.

Project Management Work Activities

- Kickoff Meeting – West Yost will prepare for and coordinate a kickoff meeting to initiate the Sanitation SCADA Upgrade Project. This meeting will be conducted at a City designated location, with attendance from key City Leadership.

- Progress Meetings – Bi-weekly (or as needed) conference calls and/or in-person meetings will be held to review project status, including work completed during the latest report period, work anticipated to be completed during the next reporting period, identified problems/issues that could affect project budget/expenditures and/or schedule, outstanding issues to be resolved, and action items. Meeting minutes will be provided for each progress call.
- Invoices and Progress Reports – Monthly Invoices and Progress Reports will be provided.
- Quality Control – Internal quality assurance and quality control will be performed for each of the project deliverables prior to final submission to City.
- Data Sharing – West Yost will coordinate with City technical staff to provide a secure site for sensitive document exchange. West Yost preference is for City to host the site and retain control of all documents.
- Project Closeout – West Yost will conduct final project closeout activities, including final document delivery and final progress report.

Through the program management task, West Yost will oversee the overall execution of the project. Activities associated with this task include handling day-to-day coordination between stakeholders, ensuring this project is implemented consistently with the projects included in the SCADA Master Plan, ensuring standards are being adhered to and updated accordingly, and ensuring the overall portfolio of projects is completed on budget and according to the project schedule.

Project Management Work Activities

- Coordination Between Stakeholders – West Yost will coordinate with City Engineering and Operations. Coordination with Operations is critical in taking any sites offline and bringing any sites online.
- Program Budget – West Yost will manage the budget for the overall program, including reviewing change orders, project overages, and assuring the overall project is executed within the allocated budget.
- Maintaining and Updating Standards – West Yost will maintain, enforce, and update all PLC programming standards, tagging standards, HMI graphics standards, and drawing standards.
- Documentation/Turnover of Systems to Operations – As construction at each site is completed, West Yost will manage all documentation of new systems and turning over new systems to City Operations staff.
- Coordination of Training – West Yost will coordinate all required training for IT staff, OT staff, and Operations staff.

Assumptions

- City Project Manager will attend bi-weekly progress meetings.
- Scope of work for Sanitation SCADA Upgrade project to be executed concurrently with other work included in the SCADA Master Plan Implementation project which has a projected completion date of October 7, 2024.

Project/Program Management Deliverables

- Kickoff meeting agendas and minutes
- Bi-Weekly meeting minutes
- Monthly project status reports and invoices
- Documentation of City standards

Task 6.2 – Engineering/Design

The engineering and design scope of work consists of the components listed below. The project will begin with design and implementation of core hardware, software, and network components. The Sanitation department consists of the following sites: Tiffany Lift Station, Bellgrave Lift Station, and Partridge Lift Station. At each lift station, PLCs, OITs, and network gear will be removed and replaced with new City-standard equipment. Programming, configuration, and start-up services will be provided by West Yost.

Hardware, Software and Network Design

Scope of work for this phase will consist of:

1. Completing a network design including all sites leveraging the existing fiber optic network cabling installed previously and review needs for redundant communications. Design will include Layer 2 and Layer 3 elements to provide network segmentation, traffic flow control and SCADA DMZ based on NIST 800-82 guidelines. The network design criteria will focus on availability, standardization and security. The design will also include future requirements for the network such as access control and video monitoring. Review how the water core network design could be leveraged to benefit Sanitation.
2. Design of computer hardware to replace obsolete computer systems. Includes servers, workstations and Operator Interface Terminal (OIT) hardware, location of server infrastructure and implementation of virtualization platform.
3. Review existing HMI architecture currently based on Ignition and plan for upgrade to latest version. Review how the water Ignition architecture could be leveraged to benefit Sanitation including alarm dialing functionality and secure remote access.

4. SCADA Standards: This project will leverage the SCADA standards created during project FP-1 of the SCADA Master Plan. Additional PLC and HMI standards will be developed as needed based on equipment and functionality within the Sanitation department.

Develop To-Be Control Strategies and HMI Configuration

Using the control strategies developed during the SCADA Master Plan as a template, work will commence with development of the to-be control strategies for each sewer lift station site. During development of control strategies, West Yost may propose operational improvements in the to-be control strategies.

Concurrently with development of the to-be control strategies, West Yost will begin working on the new Human Machine Interface (HMI) screens. The HMI Graphics Conventions, HMI Database Conventions, Tag Conventions, Reporting Standards, and Alarm Management Standards developed as part of the SCADA Master Plan will be utilized for development of the new HMI screens. Once the to-be control strategies and the HMI screens are complete, both deliverables will be reviewed with Operations staff. This will provide Operations staff with an opportunity to visualize how the new screens will look and how the new system will function.

PLC Programming and On-the-Job Training

Following feedback received from Operations, West Yost will finalize the to-be control strategies and begin programming the new Programmable Logic Controllers (PLCs) for implementation during construction. The Derived Function Block (DFB) and Tag Convention standards developed during the SCADA Master Plan will be utilized for development of the new PLC code.

Draft PLC code will be reviewed with the City in two (2) review workshops. West Yost will utilize these workshops as an opportunity to provide On-the-Job Training to City Operations Technology (OT) staff. On-the-job training will focus on basic PLC programming functions so that OT staff can make minor programming and maintenance changes to PLC programs in-house, without having to engage a System's Integrator.

Feedback received from OT and Operations staff will be incorporated into final programming to be used during implementation. PLC programming will be tested against the control strategies and updated as appropriate during the Site Acceptance Test (SAT) phase of construction.

Data Collection/Review

In parallel with the PLC programming, West Yost will conduct site visits and begin data collection for each of the lift station sites. Site visits will be aimed at determining the size of each panel, verifying existing wire terminations, evaluation of the new back panel and front of each panel.

West Yost, working along with City Operations staff, will gather input to determine which interfaces will be modified and which additional functionality will be added to enhance operations. Site visits will be focused primarily on collecting data for Electrical, Instrumentation & Controls (I&C), and Networking.

90% Design

Following data collection and review, design work will commence for the design submittal. Design efforts will focus on the following elements:

1. General
 - a. Request front-end specifications from the City, and review.
2. Instrumentation & Controls
 - a. Comprehensive retrofit of the existing PLC panels
 - i. Develop new front panel elevations including new/revised graphical displays, Operator Interface Terminal, selector switches, alarm lights, LED displays
 - b. Development of specifications
3. Networking Design
 - a. Design network architecture for each site
 - b. Port-level network drawings
 - c. Development of specifications

It is important to note that this task will commence once the bidding period for the High Priority sites (as part of the SCADA Master Plan) is complete. This approach will allow lessons learned during the previous panel designs to be incorporated into the design and retrofit of these control panels.

90% QA/QC (and Incorporation of comments)

Upon completion of design work, West Yost will conduct a thorough QA/QC of the 90% design. The QA/QC comments will be responded to and incorporated (as needed) prior to the 90% design package being formally transmitted to the City for review.

90% Submittal and Review

Following incorporation of QA/QC comments, the 90% design package will be formally transmitted to the client for review.

Following the City's review, a review workshop will be scheduled to discuss City comments.

100% Design

Following the 90% design review workshop with the City, West Yost will commence design efforts for the 100% design package. Since all design elements will have been implemented during the 90% design, the 100% design phase will focus strictly on final incorporation of City comments and updates to the front-end specifications.

100% QA/QC (and Incorporation of comments)

Upon completion of design work, West Yost will conduct a thorough QA/QC of the 100% design. QA/QC efforts will be focused on ensuring that previously issued internal QA/QC comments as well as client review comments have been incorporated as necessary. The QA/QC comments will be incorporated prior to the 100% design package being formally transmitted to the City for review.

100% Submittal and Review

Following incorporation of QA/QC comments, the 100% design package will be formally transmitted to the client for review.

Following the City's review, a review workshop will be scheduled to formally review the final submittal with the City.

Assumptions:

- Core network and server components, including Sanitation department's core components, to be installed during task 1 (foundational projects).
- City to purchase all networking equipment for field sites. City to turn over purchased equipment to contractor for installation.
- Control strategies, HMI screens, and PLC programming are typical for all lift station sites.
- Partridge Lift Station has additional equipment (JWC Muffin Monster) which will require additional I/O and alarming.

Engineering/Design Deliverables:

- To-Be Control Strategies
- HMI Screens
- PLC programming
- Design drawings
- Specifications

Task 6.3 – Bidding Services

During the bidding period, West Yost will assist the City by answering questions from bidders, preparing addendums, reviewing bids, making recommendations for awards of the construction contract, and preparation of conformed construction documents.

Work Activities

This task will involve assisting the City as required during the bid phase of the Project. Bidding Services tasks consist of the following:

1. Lead the pre-bid meeting, including development of meeting materials, coordination, and development and distribution of meeting minutes to the City. The City will distribute meeting minutes to meeting attendees.
2. Respond to bidder's inquiries during the bidding process. Responses will be closely coordinated with City staff.
3. If it becomes necessary, the design team will develop addenda that may be needed to document responses to bidders' inquiries.
4. Review bids and make a recommendation to award the contract.
5. Preparation of conformed design drawings and technical specifications that incorporate changes made by addenda during the bidding period.

Assumptions

- No pre-bid contractor outreach is included in this scope.
- There will be one pre-bid meeting, led by West Yost staff.
- West Yost will respond to 10 questions from bidders during the bid period.
- West Yost will prepare up to three addenda and deliver to the City.
- The City will distribute contract documents and addendums.

Bidding Services Deliverables

- Pre-bid Meeting materials and meeting minutes.
- Addenda drawings and specifications.
- Conformed drawings and specifications.

Task 6.4 – Construction Management/Inspection

West Yost will provide full construction management, program management, and inspection services. Typical tasks associated with this task include ensuring site safety at all times, correspondence and document control, progress meetings, coordination with Operations staff, responding to Requests for Information (RFIs), reviewing submittals, construction schedule management, managing construction costs, managing change orders, quality control and inspections, reviewing payments to contractors and vendors, management of as-built drawing sets, monthly status reports, and final project closeout tasks.

Construction Administration Work Activities

1. Pre-Construction Conference / NTP – West Yost will attend the preconstruction conference conducted by the City. Open items will be carried over to the first Progress Meeting.
2. Site Safety – West Yost will provide safety related equipment to its project staff such as hard hats, safety vests, safety glasses, gloves, ear protection, etc. West Yost will conduct bi-weekly safety meetings with its field staff and report any incidents to the City if they occur. West Yost will also monitor the safety program and practices of the Contractor to confirm that they are providing a safe work site for our staff members as well as those of the City. Safety will be the first item on our standing Progress Meeting agenda. If any unsafe acts or potential unsafe situations are found during our inspections or general observations of the work, we will immediately notify the Contractor to take action. Any incidents that occur will be followed up with the Contractor after receipt of their incident report. The report will be shared with the City and maintained in the document control system (DCS) in a safety incident log.
3. Correspondence / Document Control – West Yost will be the point of contact for all matters related to the administration of the construction contract with the Contractor selected for the project. All correspondence in and out related to the project will be through the West Yost CM. This includes maintaining the project records in a web-based document control system (DCS) – Procore. West Yost will provide training to the City, designer, and the Contractor for their use of the DCS.
4. Monthly Management Meetings – West Yost will arrange and conduct monthly management meetings with the City to review the overall status of the project. Logs, progress schedule, potential change orders, safety reports, coordination items, and project issues will be reviewed with the intent to keep the City informed and to develop strategies for resolving construction or contractual issues.
5. Progress / Coordination Meetings – West Yost will prepare agendas, conduct the bi-weekly progress meetings with the Contractor, design team, City staff, and other

members of the project team to review overall progress, coordination, and communication related to safety, submittals, RFIs, changes, progress payments, coordination with Operations, progress schedules, and quality. If other special meetings are necessary, West Yost will conduct and collect summaries of the discussions. Open items will be tracked to completion. The meetings will be documented in the DCS.

6. Construction Coordination with Plant Operations – West Yost will arrange, conduct, and document daily coordination meetings with the designated staff member of the City’s operations department. The meeting will also be attended by a representative of the Contractor. The purpose is to convey what will be occurring that day by the Contractor and to confirm that these activities will minimize the impact to operations and maintenance activities. A simple report (email) will be issued by West Yost that summarizes the discussions and include a brief summary of the planned work by both parties (Contractor and the City). Included in this scope will be to utilize the Plant Access Request (PAR) procedure that will identify upcoming activities that will impact operations. The PARs will be a running agenda item on the weekly progress meetings to confirm that we are planning the work and are addressing the potential impacts before the work starts.
7. RFIs – West Yost will receive all RFIs generated and issued by the Contractor. RFIs will be upload into the DCS for response by the design team. If the response appears to have changed the contract scope, quality, or time a potential change order (PCO) number will be assigned and used to track its resolution to closeout. Logs will be generated and be discussed during the weekly meetings.
8. Submittals – West Yost will receive all shop drawings, product data, certifications, work plans, schedules, etc. that are typically required of construction contracts and will upload them into the DCS. The submittals that are related to the design shall be forwarded to the design team for their review and comment. We will input the review comments into the DCS and formally return the submittal to the Contractor. Logs will be maintained showing submittals in for review, submittals that have been returned with Amend and Resubmit status, and submittals not yet transmitted by the Contractor. Construction related submittals such as work plans, corporate safety plans, site-specific safety plans, etc. will be reviewed by West Yost with the submittal and comments transmitted to the design team for their records.
9. Schedule Management – West Yost will review the Contractor’s recommendations to modify the baseline schedule and monthly updates to confirm that depiction of the schedules meets the contract scheduling requirements and is adequately updated each month with correct progress, adjustments, changes, and summaries. If there are challenges/delays in obtaining an acceptable schedule from the Contractor, West Yost will recommend that an appropriately valued withhold to subsequent progress payments applied to motivate the Contractor in corrective

action. If during tracking of performance the schedule appears to be slipping behind, a Recovery Schedule will be requested from the Contractor and as part of this issue will be determining the responsible party for the delay. Included in this scope will be the preparation and issuance of the Weekly Statement of Working Days report that identifies the conditions of each day's work, weather or other impacts beyond the control of the Contractor and any time extensions that were authorized in a change order or from weather impacts.

10. Cost Control – West Yost will track progress payments, PCOs, executed Change Orders, change order requests from the Contractor, and claims/disputes/issues. A comparison of the amount paid as a percentage of the total contract amount and the amount of time expended will be used to assess if the project is progressing adequately from an earned value perspective. A tracking log will be developed and maintained to track all change order items and potential changes and issues that will be used to inform the City of its potential exposure to any and all issues. This will be presented in the Monthly Report and in Monthly Meetings with the City.
11. Change Orders – West Yost will manage the change order process by initiating PCOs from RFI responses, submittal review comments, or change order requests from the Contractor. West Yost will determine if the item has merit for entitlement. Items in value of less than five thousand dollars will be evaluated for merit and approved by West Yost. Items in value equal to five thousand dollars and over will not only be reviewed by West Yost but also reviewed with the City to obtain their concurrence that the item is valid. Quotes will be obtained from the Contractor for each PCO. If the work is necessary, negotiations will occur to obtain a fair price for the work. If a price cannot be reached, or there is no time to negotiate a fair price, we will direct the work to proceed – time & materials. A final price will be summarized and agreed. West Yost will prepare formal change orders per City internal procedures. Once fully agreed the costs will be included in the Contractor's schedule of values and West Yost will confirm the correct percent complete on which to authorize payment during each progress payment request submitted by the Contractor.
12. Dispute Resolution – West Yost will lead the effort in resolving disputes with the Contractor. The resolution process will involve a detailed review and summary of the contract wording and presentation to ascertain a fair interpretation of the contract requirements to the City. After review with the City of the findings, a meeting will be held with the Contractor to present the findings and to hear their position. If an equitable agreement cannot be made, we will direct the Contractor to follow the guidelines in the front-end documents in filing a claim and then follow the requirements of the contract in resolving disputes.
13. Quality Control / Inspection – West Yost will provide the day-to-day quality assurance inspection of the Contractor's performance of the work. This will include confirming compliance with the contract plans, specs, approved submittals,

applicable RFI responses, and approved change orders. If work is observed or tested to not be in compliance with the contract, a verbal notice followed by a Non-Compliance Notice (NCN) will be issued to the Contractor. If an NCN is issued a corresponding payment value will be withheld on the monthly progress payment until the issue is satisfactorily resolved. Daily inspection reports will be written and kept in the DCS. The reports will contain a brief summary of the work performed, important discussions needing to be documented, and photos of the work performed. The overall quality requirements of the contract will be emphasized to the Contractor with pre-activity quality control meetings where we will review the planned work, contract requirements, submittals, RFIs, and change orders to confirm everyone understands what will be built and how it will be built. Also, the Contractor will be asked to explain their means and methods (M&Ms) so the group can ascertain whether the required quality can be achieved with those M&Ms.

14. Permit / Environmental Compliance – West Yost will maintain a permit inventory and tracking log that will monitor compliance with each permit applicable to the construction project. Any reporting required by the permit will be prepared and transmitted to the permitting agency via email.
15. Progress Payments – West Yost will review the updated/statused Schedule of Values (SOV), compare the statused amounts identified by the Contractor and either accept the value assigned or negotiate a different amount. A summary document will be prepared and signed off by the West Yost CM and the Contractor certifying the amount due. The payment request will be transmitted to the City for approval, processing and payment. West Yost will track payment to the Contractor to demonstrate compliance with the payment processing times per the public contract code. Included in this task will be to confirm that the Contractor has submitted the certified payroll reports to the City.
16. As-Built Record Drawings – Each month as part of the progress payment approval process, West Yost will review the Contractor’s efforts in maintaining a record set of as-built drawings and specifications. Notations such as RFI responses, clarifications, and change orders will be checked. If there are important components that may be difficult to locate once buried or cast in concrete, rough measurements will be used to approximate the location and be reflected on the as-built drawings. The review will occur each month and progress payments may be withheld until the record drawings are maintained to an acceptable level. At project closeout, the Contractor will transmit their as-built record drawings to West Yost. West Yost will review these updated plans and compare them with our version of the as-built conditions.
17. Monthly Status Reports – West Yost will prepare monthly status reports to communicate to the City, design team, and outside agencies (if necessary) the progress of the work. The reporting will predominantly be through job-site photos

and captions. Additional information will include project issues and tracking of special or contentious items. The monthly report will include information on schedule adherence, cost management, project issues, and the status of the CM contract.

18. Testing, Startup, and Commissioning – During the construction phase of the project, West Yost will conduct weekly startup meetings to review performance related to actual testing, submittals and approvals, training, and issues found during the testing and startup activities. Testing, startup, and commissioning activities will be witnessed by West Yost’s resident engineer. West Yost will also provide onsite PLC programming, HMI configuration, and network setup/configuration support services. When appropriate, City Operations, OT, and IT staff will be integrated with the activities so that when the operation of the new systems are transferred to their control, the transition will be seamless.

Construction Administration Deliverables

- Safety Incident Log
- Progress/Coordination Meeting agendas and meeting minutes
- Daily Coordination with Operations Report
- RFI Responses
- Submittal Responses
- SOV Summary Document
- As-Built Record Drawings
- Monthly Status Report

Closeout Phase Work Activities

1. Punchlist and Final Walk Through – West Yost will arrange a final inspection once the Contractor has submitted a request for final inspection. The inspection will create a final punchlist of work items remaining to be completed. The punchlist will be transmitted to the Contractor. The remainder of the contract will be to confirm that the items on the punchlist have been addressed and any other remaining deliverables are received. West Yost will confirm that aspects of the project administration have been completed. It will address any outstanding stop notices and request that all suppliers and subcontractors come forward if payments for their services have not been made or other payment issues may exist so that the release of retention can be made by the City.
2. Final Report – West Yost will prepare a final report of the project that addresses the performance of cost, time and quality management. The report will contain a photo section and include a list of issues along with discussion on how the matter

was addressed. Recommendations will be made on how to improve future contracts of similar nature.

Assumptions

- Preconstruction Meeting will be a 2-hour meeting conducted via Microsoft Teams
- City CM staff will attend the Preconstruction Meeting
- Construction duration for each sewer lift station site assumed to be four weeks. This is consistent with construction durations for each of the Medium Priority sites (see Task 3 of SCADA Master Plan Implementation Project).

Closeout Phase Deliverables

- Final Punchlist
- Final Report

Sincerely,

WEST YOST ASSOCIATES

Daniel Groves, PE
Control Systems Engineer
RCSE# 45679

cc: Michael Gruenbaum

Attachment(s):

West Yost Associates	P/VP \$307	AE/AS/AG II \$216	ETM II \$304 D. Groves	ETM I \$302 J.Cox	PTS I \$277	STS II \$266	STS I \$254 K. Smith	TS IV \$232	TS III \$208 M. Gruenbaum	TS II \$185 J. Ramos	TS I \$162 B. Bartolucci M. Altunel	CAD II \$160	AIDE \$95 TBD	P/VP \$307	Labor		Costs		
															Hours	Fee	Sub. w/ markup 10%	Other Direct	Total Costs
PROJECT: SCADA Master Plan Implementation																			
Task 6 Sanitation SCADA Upgrade																			
6.01 Project Management			41				16		127	43					227	\$ 50,899			\$ 50,899
6.02 Engineering			10	78			192		160	204	211		292		1147	\$ 208,306			\$ 208,306
6.03 Bidding			25						25						50	\$ 12,800			\$ 12,800
6.04 Construction Management/Inspection									339				487		826	\$ 116,777		\$ 5,000	\$ 121,777
Subtotal, Task 6 (hours)	0	0	76	78	0	0	208	0	651	247	211	0	779	0	2250				
Subtotal, Task 6 (\$)			\$ 23,104	\$ 23,556			\$ 52,832		\$ 135,408	\$ 45,695	\$ 34,182		\$ 74,005			\$ 388,782		\$ 5,000	\$ 393,782
SUBTOTAL FROM ALL TASKS ABOVE (\$)			\$ 23,104	\$ 23,556			\$ 52,832		\$ 135,408	\$ 45,695	\$ 34,182		\$ 74,005			\$ 388,782		\$ 5,000	\$ 393,782
* 15% Contingency			\$ 3,466	\$ 3,533			\$ 7,925		\$ 20,311	\$ 6,854	\$ 5,127		\$ 11,101			\$ 58,317		\$ 750	\$ 59,067
TOTAL (hours)	0	0	76	78	0	0	208	0	651	247	211	0	779	0	2,250				
TOTAL (\$)			\$ 26,570	\$ 27,089			\$ 60,757		\$ 155,719	\$ 52,549	\$ 39,309		\$ 85,106			\$ 447,099	\$ 0	\$ 5,750	\$ 452,849

ID	Task Name	Duration	Start	Finish	2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter		
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Garden Grove - SCADA Master Plan Implementation	1280 days?	Tue 3/24/20	Mon 2/17/25																								
2	Key Milestones	1150 days	Tue 9/22/20	Mon 2/17/25																								
9	Task 1 - Foundational Projects	1036 days	Mon 10/12/20	Tue 10/1/24																								
10	Project/Program Management	1036 days	Mon 10/12/20	Tue 10/1/24																								
13	FP1 through FP3 - Foundational Projects	215 days	Tue 10/13/20	Mon 8/9/21																								
14	Engineering Design and Implementation (FP1)	185 days	Tue 10/13/20	Mon 6/28/21																								
15	Phase 1: Hardware, Software and Network Design	6.25 mons	Tue 10/13/20	Mon 4/5/21																								
16	Phase 2: SCADA Standardization	6 mons	Mon 10/19/20	Fri 4/2/21																								
17	Phase 3: Global Operations Improvements	3 mons	Tue 4/6/21	Mon 6/28/21																								
18	As-Is Operational Strategy Development	7 wks	Mon 12/14/20	Fri 1/29/21																								
19	PFAS Design Coordination	3 wks	Tue 10/13/20	Mon 11/2/20																								
20	Engineering Design and Implementation (FP2 and FP3)	116 days	Mon 3/1/21	Mon 8/9/21																								
30	FP4 - Policies and Procedures Development	494 days	Mon 11/30/20	Thu 10/20/22																								
41	FP5 - Physical Security Improvements Project	177 days	Mon 1/1/24	Tue 9/3/24																								
52	Task 2 - High Priority	372 days	Mon 8/9/21	Wed 1/11/23																								
53	Project/Program Management	372 days	Mon 8/9/21	Wed 1/11/23																								
56	Engineering Design	142 days	Tue 8/10/21	Wed 2/23/22																								
57	Develop To-Be Control Strategies	2 mons	Tue 8/10/21	Mon 10/4/21																								
58	HMI Configuration	2 mons	Tue 8/31/21	Mon 10/25/21																								
59	PLC Programming	2 mons	Tue 10/5/21	Mon 11/29/21																								
60	Site Visits	2 wks	Tue 8/10/21	Mon 8/23/21																								
61	90% Design	3 mons	Tue 10/5/21	Mon 12/27/21																								
62	90% QA/QC (and incorporate comments)	4 days	Tue 12/28/21	Fri 12/31/21																								
63	90% Submittal and Review	3 wks	Mon 1/3/22	Fri 1/21/22																								
64	100% Design	1 mon	Mon 1/24/22	Fri 2/18/22																								
65	100% QA/QC (and incorporate comments)	3 days	Mon 2/21/22	Wed 2/23/22																								
66	100% Submittal	0 days	Wed 2/23/22	Wed 2/23/22																								
67	Bidding	3 mons	Thu 2/24/22	Wed 5/18/22																								
68	Construction Management/Inspection	150 days	Thu 5/19/22	Wed 12/14/22																								
74	Task 3 - Medium Priority	382 days	Wed 1/11/23	Fri 6/28/24																								
100	Task 4 - Low Priority	166 days	Fri 6/28/24	Mon 2/17/25																								
117	Task 5 - Contingency	1 day?	Tue 3/24/20	Tue 3/24/20																								
118	Task 6 - Sanitation SCADA Upgrade	512 days	Mon 4/5/21	Tue 3/21/23																								
119	Project/Program Management	512 days	Mon 4/5/21	Tue 3/21/23																								
120	Kickoff	0 days	Mon 4/5/21	Mon 4/5/21																								
121	Closeout	1 mon	Wed 2/22/23	Tue 3/21/23																								
122	Engineering Design	372 days	Mon 4/5/21	Tue 9/6/22																								
123	Hardware, Software and Network Design	4 wks	Mon 4/5/21	Fri 4/30/21																								

Project: Garden Grove - SCADA Date: Tue 1/19/21	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			

